Standards-Based Classroom Activities in Meteorology@
(for General Session Presentation)

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ABSTRACT

Canarsie High School is typical urban high school in Brooklyn, New York. An initiative for the Brooklyn High School District has been to enrich teaching strategies and incorporate technologies in classroom instruction to better prepare students for entry into college and in the science-related work force. Our collaboration with City College of New York (*CCNY*) to initiate and integrate these relevant technologies has been met with measurable success, as it has significantly improved science classroom instruction with increased student performance. These strategical changes are consistent with National Science Education reform movements for mainstream, gifted and special education students.

We have effectively motivated student interest and enhanced the learning potential of all students. Our lessons involve extensive computer and Internet applications, focusing our efforts in developing high-ordered reasoning skills to address the required concepts covered in Earth Science and Environmental Science curricula. Our *@Canarsie High School Weather Station@* feeds >*live*= weather data for student use in the classrooms. Student-centered laboratory activities and long-term investigations have been designed, written and incorporated into daily classroom lessons and laboratory sections. This component is in alignment with the *New Learning and Performance Standards*, as it makes use of investigative and inquiry-based studies through technological resources. This was accomplished through our data readings, various World Wide Web sites and City College=s >*Metropolitan Weather Network*= (*MetNet*).

Weather data from area >*cluster*= schools are also used to compare micro-climates within our local region. This fostered peer communication skills among students and staff throughout the Brooklyn High School District. This is a crucial aspect of applied learning, as related science concepts are integrated and clearly demonstrated in our daily lives.

We provide professional staff development for teachers, conducted throughout the school year, for both experienced and new teachers. School-based personnel at both the high school and local community school levels hold these sessions at both the college and public school sites. Additional instructional methodologies to enrich the learning experience includes innovative programs such as *The Signals of Spring* (United States Satellite Laboratory, Inc.) which allows students to explore animal migrations at it relates to local weather conditions using real-time NASA earth images. Further support for high school students is their acceptance for select positions at the colleges to conduct individualized summer and year-round research in the field of meteorology and environmental science.